Publications

B165-1015-12m

BULLETIN

OF THE

UNIVERSITY OF TEXAS

1915: No. 60

OCTOBER 25 1915

Schoolhouse Meeting

Discussion of

The Farm Garden

Prepared by

E. J. KYLE

Dean of the Department of Agriculture in the Agricultural and Mechanical College of Texas, and

W. S. TAYLOR

Associate Professor of Agricultural Education in The University of Texas

Published by the University six times a month and entered as second-class mail matter at the postoffice at AUSTIN, TEXAS

The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston.

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

President Mirabeau B. Lamar.

To the Chairman of the Schoolhouse Meeting:

The discussions of the questions given below have been prepared for the meeting to be held at the schoolhouse on Friday afternoon and are for the use of the person who conducts the meeting. Usually it will be best to have the questions written upon the blackboard before the meeting opens. When the time for discussion arrives, first have the question read aloud and then call for discussion from the members present. Occasionally the chairman should call out someone whom he knows to be well qualified to answer the question. At times it is well to let such person know several days in advance that he or she will be called upon so that special preparation may be made by study of some of the bulletins referred to or of other literature. As soon as the discussion has brought out whatever of interest the members present may know, then have read the discussion of the question that is given below and, if desirable, allow discussion of that. Good judgment must be used by the chairman in calling out discussion and in stopping it before it becomes unprofitable. At times it would be well to omit, or pass lightly over, certain questions and concentrate on others. Be sure to stop before the members are tired and always try to have the ideas that are brought out applied to the local conditions and needs. When a meeting results in a desire to carry out some practical plan, arrange for those interested in this plan to remain after the meeting and take the necessary steps at once. Strike while the iron is hot.

Fellow Teachers and Fellow Citizens:

Groceries are higher than we have ever known them to be before. It is therefore more important than ever that we plan to raise a large part of our living at home. One of the best and least expensive ways of doing this is through the home garden. Enduring thrift must begin at home. Too many tin cans and paper sacks in the pantry with grocery labels on them are the surest signs of a lack of true farm prosperity. If the present crisis continues, and the prospects are that it will, and we are driven through necessity to produce more of our living at home, it will in the end be a great blessing to the people of the South. It is for us through a higher degree of thrift in the individual home to turn the present economic disturbance into the victory of a better living more economically produced.

Many sections of Texas offer exceptional opportunities for valuable home gardens. Some vegetables for table use can be grown at all seasons of the year. Yet a large per cent of our farm homes have either no garden at all or a very poor one for only a few months each year. Every farm home in Texas should have a garden sufficiently well tended and cared for to produce all the vegetables necessary for home consumption. With the right combination of intelligence and industry, a convenient, well adapted location for a profitable garden spot can be selected and improved on practically every farm in the state.

The following discussion of your list of questions on the home garden has been prepared by the Extension Departments of the Agricultural and Mechanical College and the University of Texas, working in co-operation. If it is desired to have any further questions concerning the garden answered, write to the Extension Department of the A. & M. College, College Station, Texas, or to the Extension Department of the University of Texas, Austin, Texas. It is not intended that the discussions given here should be more than mere introductions to the subject. But by bringing together the practical experiences of the community, by considering the following discussions, and then by further study of the bulletins and books that are recommended, anyone can soon acquire for himself or herself really expert knowledge of the subject.

A good garden on each of the farms in Texas would not only add tens of millions of dollars annually to the productions of the State and help the farmers to hold their staple crops till a fair price could be secured for them, but it would give to the farmer's family a more attractive and better balanced diet, which would greatly improve their health and increase their happiness and efficiency.

Our dry summers and abundant supply of insects certainly offer serious obstacles to a garden in Texas, but these can all be overcome by intelligent preparation of soil, selection of suitable varieties of plants and of the right time of planting, and by the use of insecticides and other methods of protection now well understood. This bulletin has been prepared by men who have actual experience with Texas conditions, as well as theoretical knowledge. We know that what they recommend can be done because it has been done successfully by many. Each community has its own special problems, but with the general directions here given anyone may, with a little intelligence and industry, work out a system of gardening for his locality that will succeed. Try it.

A. CASWELL ELLIS,
Acting Director, Department of Extension,
The University of Texas, Austin, Texas.

QUESTIONS ON THE HOME GARDEN

1. What are the main points to consider in choosing the location of a garden?
2. Why do so few people have good home gardens?
3. What is the commonest cause of garden failure in this locality?
4. What special local conditions are favorable to good gardens in this portion of the State?
5. How can the rows and the planting of the vegetables in the garden be arranged so as to reduce the labor of cultivation?
6. What preparation should be made before planting?
7. Make a plan for a spring garden of one-fourth of an acre, showing the arrangement of the rows, the time of planting, and the arrangement of the varieties planted so as to keep every row occupied all the time and the garden producing something for the table or for the market every month in the year.
8. What can be grown in a fall and winter garden, and how can it be done?
9. Is it possible in your community to keep every row of the garden busy producing vegetables of some sort all the year? How?
10. How much could the grocery bill of a family of six be reduced during one year by a well kept garden of one-half acre?
11. Who is the best gardener in your community?
12. What insect pests will you have to combat? How can you overcome them?
13. How can you keep chickens and have a garden too?
14. Why are home-grown vegetables preferable to those bought on the market?
15. What is lacking in a diet of meat, bread, and molasses? What happens to sailors and explorers when they can get no fruit or vegetables for several months?
16. What diseases are caused by eating steadily a meat and bread diet with very few vegetables?
17. Why is it usually profitable to can and dry some vegetables of the garden?
18. What is the best method of storing vegetables, both fresh and canned?
19. How can we get reliable garden seed at reasonable prices?

ANSWERS TO QUESTIONS

No. 1. (1) In selecting a place for a garden, first of all the plat of ground chosen should not be too large. A small plat intensively utilized is much more profitable and more easily handled than a larger area not so well worked. (2) The nearness to the well, or other source of water supply is important. In the preparation of the hot bed, the ripening of manure, the germinating of seed, and the transplanting of tender plants, a convenient supply of water is very helpful. If water can be had in sufficient quantity for irigating, it is much better, though this is not always necessary. (3) It is well to locate the garden as near to an available supply of barnyard manure as possible. In fact, much depends upon the preparation and care of the compost heap so as to fully rot the manure and set free much of the plant food in it before it is applied to the garden soil. (4) When choosing a site for a garden, it is well, other things being considered, to select the place that will involve the least possible expense for fencing. The ordinary light woven-wire netting makes the best fence and is not expensive. Without proper fencing, depredations from poultry and rabbits will be harmful in many instances. When it is impossible to provide a good fence, it may be well to place the garden in the field beyond the reach of the chickens at the house. In those sections in which rabbits are not numerous, many good gardens are raised in this way every year. But for the sake of convenience, when practicable, always put the garden as close to the house as possible. (5) Drainage is another important item to consider in choosing a garden spot. Never select a low swampy place. Most garden vegetables do not thrive in wet, sticky soil. For this reason, always select a place that has a gentle slope, or one that lends itself well to the construction of a system of drainage; but in no case should the rows be run directly up and down the slope, as this may lead to serious washing in case of heavy rainfall.

No. 5. (1) The garden on the farm should be so planted and arranged as to require a minimum of hand labor. The plat, therefore, should be in the form of a long narrow strip. It should be laid out in long rows, far enough apart to permit the

use of a horse and plow in tending the crops. (2) Grouping together vegetables that are to be cultivated in the same way is also desirable, as it reduces the number of plantings, and each row may be tended as one crop. When an entire row of one kind of vegetable would be too much, two or three kinds may be planted in the same row so long as all the crop in a given row requires practically the same kind of tillage and care. Start the planting with the earliest vegetables of the season on one side of the garden, thus permitting the unplanted portion to be harrowed and kept in a moist and pulverized condition.

No. 6. (1) Field methods should be practiced in preparing the land for planting, and as much of the preliminary work should be done in the fall as possible. (2) If the land has been manured and plowed in the fall or early winter, very little labor is necessary in the preparation of the seed-bed for the spring planting. Going over it with the harrow is usually all that is necessary. The actual planting of the garden is a simple matter where a definite plan has been previously worked out, so that we know what vegetables to plant first, where to plant them, and how much to plant. (3) The land should be fertilized with well rotted manure in the fall. Manure that is well rotted gives better results and is less liable than fresh manure to cause the crop to "burn" during dry spells. In those sections of the State where there is an abundance of rainfall, a minimum of twenty loads per acre should be used. In fact, the best gardens receive two or three times this much. However, in many places where rain is not so plentiful, it is sometimes best not to put more than ten loads per acre. Especially is this true if the manure has not had time to fully rot in the compost heap before its application to the soil. Where manure cannot be obtained, equal parts of cottonseed meal and acid phosphate may be used. Apply this mixture at the rate of 400 to 600 pounds per acre. If this mixture is not available, apply 400 pounds of cottonseed meal in the drill ten days or two weeks before planting.

No. 7. In the accompanying list are included the vegetables commonly grown in Texas, with the arrangement of rows, distance between rows, and time of planting. Rows 100 feet long are taken as a basis, and except where especially noted, they are three feet apart. The planting dates given are for the

latitude of Austin. Due allowances must be made for distances north and south of this latitude. (The teacher will please draw the plan on the board.)

January 1.—Sow cabbage and kohl-rabi in box or seed-bed. Harden off in cold-frame. Transplant about February 20.

January 15—Sow tomato seed in hot-bed. To cold-frame February 15. To open field as soon as the danger of frost is over.

February 15.—Row No. 1, 1-2 carrots; 1-3 parsnips; 1-6 parsley. Plant a few early radish seed along the row so as to mark it plainly while the slower growing plants are too small to be seen easily.

February 20.—Row No. 2, onion sets with lettuce planted in same row. (Onion seed should be planted in the fall, Sept. 25, Oct. 5, and transplanted to open field Dec. 1.)

February 20.—Row No. 3, 1-2 peas, extra early; 1-2 onion sets.

February 20.—Row No. 4, 1-2 early beets; 1-2 spinach. Mark with long radishes.

February 20.—Row No. 5, 1-2 turnips; 1-2 mustard.

February 20.—Rows Nos. 6. 7, and 8, early Irish potatoes. (Follow all early vegetables with sweet potatoes.)

March 1-15.—Plant a bed of sweet potatoes for "slips." Also plant tomatoes, pepper, and egg-plant in box or seed-bed.

March 1-15.—Rows Nos. 9 and 10, 2-3 cabbage; 2-3 kohl-rabi; 2-3 cauliflower; transplanted from seedbed which was started February 1st.

March 1-15.—Row No. 11, early sweet corn.

March 1-15.—Row No. 12, stringless green pod beans. By planting these "snap" beans about every three weeks one can have some for the table till well into the summer. (Follow rows 11 and 12 with black-eyed peas.)

April 1-15.—Row No. 13, tomatoes, 33 plants three feet apart in row; transplanted from seed-bed.

April 1-15.—Row No. 14, string beans, Kentucky Wonder. (This variety comes in later than the wax beans and will continue to thrive on through hot weather that the wax beans will not stand.)

April 1-15.—Row No. 15, 1-2 Lima beans; 1-2 okra.

March 15-April 1.—Row No. 16, 1-2 pepper; 1-2 egg-plant; transplanted from seed-bed.

April 15-30.—Row No. 17, six feet from row No. 16. Cucumbers five feet apart in row.

April 15-30.—Row No. 18, six feet from row No. 17. 1-2 summer squash; 1-2 winter squash, six feet apart in row.

April 15-30.—Row No. 19, six feet from row No. 18. 1-2 watermelon; 1-2 musk melon. Six feet apart in row.

April 15-30.—Row No. 20, collards for use in fall and winter. Pumpkins and kershaws may be planted in the field outside of the regular garden, and should not be omitted.

PLAN FOR A SPRING GARDEN.

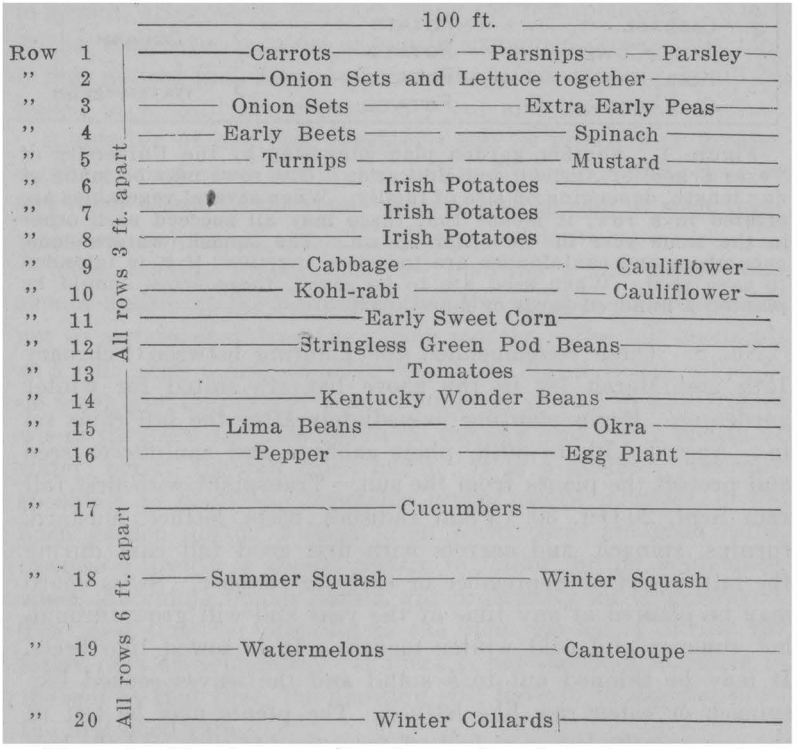

Figure 1. Plan for a small spring garden of about one-seventh of an acre. To increase size of garden, increase length of rows. Follow all early vegetables with sweet potatoes. If it is desired to save seed from them, the watermelons and canteloupes should be planted away from the garden, at least a hundred yards distant to prevent being mixed with the squash and cucumbers by insects. Pumpkins and hershaws should also be planted outside in the field.

PLAN FOR AN ALL-YEAR GARDEN.

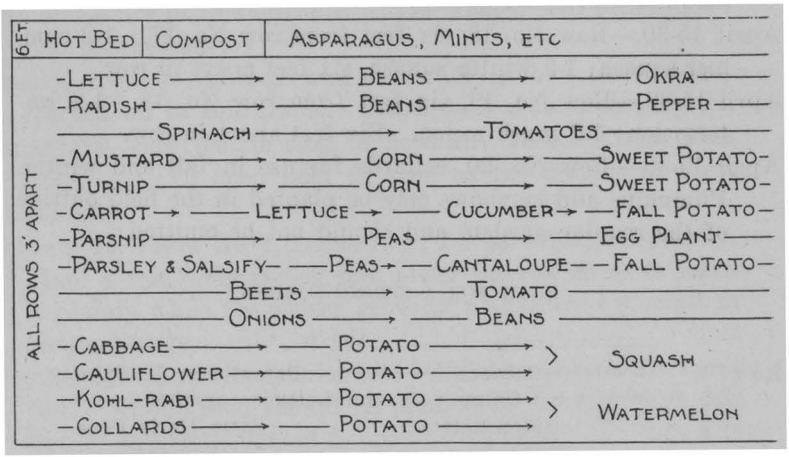

Figure 1. Another garden plan suggested by the University of Texas School of Agricultural Education. The rows may be made of any length, depending on size of family. When several vegetables are printed in a row, it means that these may all succeed each other in the same year in the order shown. The squash, watermelons, cucumbers and cantaloupes are too close together, if it is intended to save seed. When seed are to be saved, these crops should be planted a hundred yards or more apart.

No. 8. Those recommended for planting between February 15th and March 1st in the above list are suited for winter gardening. Begin planting immediately after the fall rains set in. August 15th to 30th, plant cabbage and cauliflower seed and protect the plants from the sun. Transplant with first fall rain Sept. 20-Oct. 30. Plant radishes, beets, lettuce, mustard, turnips, spinach, and carrots with first good fall rain during the latter part of September or early in October. Swiss chard may be planted at any time of the year and will grow through hot summer and cold winter months. It is sowed like beets. It may be thinned out to a stand and the leaves cooked like spinach or eaten raw like lettuce. The plants may be left in the row and the leaves picked off from time to time and the bud left to continue growth, or the entire head may be gathered and cooked or the tender hearts eaten raw and the tough outer leaves cooked.

Irish potatoes should be planted from the middle of August to the first of September. It is advisable to use the small un-

marketable tubers left over from the spring crop. These tubers should be planted whole and should be deeper and on less of a ridge than for spring planting. In order to have potatoes germinate readily, it is advisable to have them begin sprouting before being placed in the ground. The best way to do this is to select a shady place and dig out a trench from four to six inches deep and about six feet wide, the length to depend upon the number of tubers to be planted. After the trench has been completed, the potatoes should be placed in it about three deep and then covered with hay. The hay and potatoes should be dampened and kept in that condition until the potatoes begin to sprout, after which they are ready for transplanting. While in this trench the potatoes should be examined occasionally and if it is noticed that they are beginning to rot, the hay should be pulled back until the potatoes dry out and the rot is checked.

A number of our best vegetables can be grown to a greater degree of perfection during the fall and winter months than at any other season of the year. This is true in case of such vegetables as cauliflower, spinach, cabbage and lettuce.

When making preparations for planting a fall garden one should realize at the beginning that the weather conditions are not so certain as during the spring months. The fall opens up as a rule after a long summer drouth, so that it is impossible to do much planting except where plants are started in cold frames where they can be protected from the sun and given plenty of water, before the fall rains begin. It is a mistake, generally speaking, to plant any vegetable crops, except potatoes, in the open garden during August, even when there are good rains, because a drouth is almost certain to follow during September, when the young tender plants will practically all be destroyed. The ideal time for planting in the open garden is during the latter part of September. If there is not sufficient moisture in the soil at that time, the planting will have to be delayed until the first good rain.

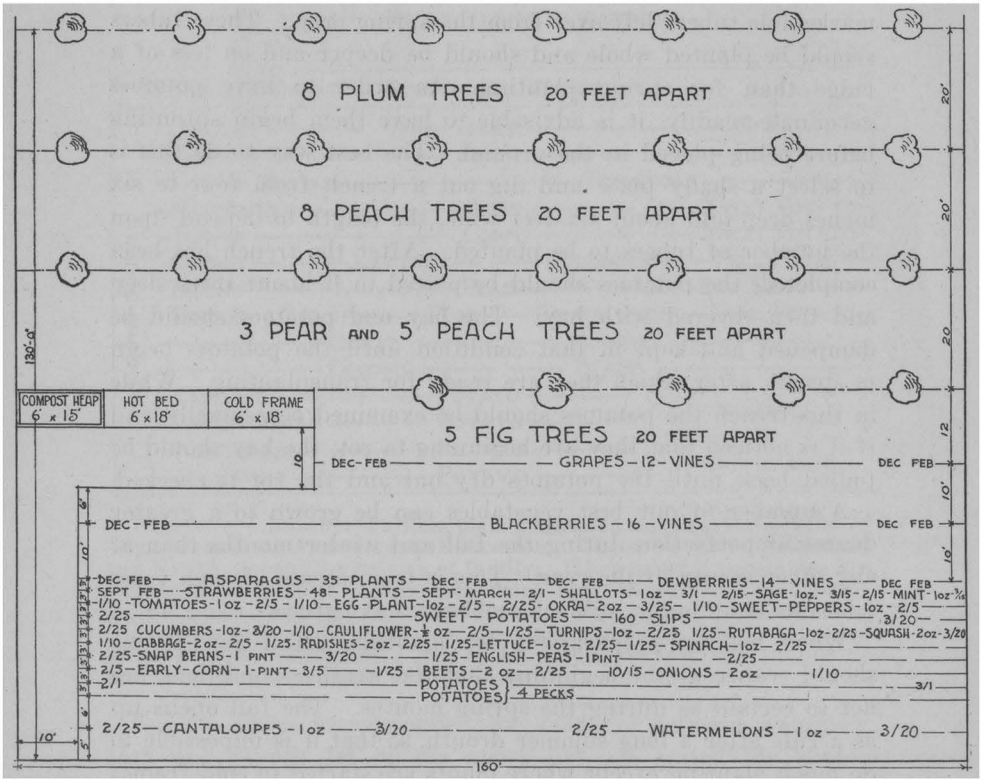

Figure 2. The above plan is prepared and recommended by the Horticultural Department of the Agricultural and Mechanical College of Texas, College Station, Texas, which department is also responsible for the following statements and recommendation of varieties:

"The garden is planted to supply six persons. The first date shown in the plan indicates the planting date for that vegetable in South Texas; the second date shown is for North Texas.

"This garden, well cared for, and the surplus products canned, will be worth the yield from ten acres of cotton.

"Start all tender plants in hot bed, transplant to cold frame and move to field after danger of frost is past.

"For a succession crops plant the seed at intervals of eight to twelve days.

"Prepare the land well. Fresh stable manure should be put on in the fall.

"Twenty-four inches of manure in the hot bed will give heat for sixty days.

"Do not plant cucumbers and canteloupes close together.

"Do not let insects get a start."

The following varieties are recommended:

GOOD VARIETIES.

Plums: Abundance, Excelsior, Gonzales.
Peaches: South Texas: Waldo, Thurber; North Texas: Dewey, Slappy, Elberta.
Pears: Kieffer, Le Conte.
Figs: Brown Marseilles, Magnolia.
Grapes: South Texas: President, Lukfata; North Texas: W. B. Munson, Concord.
Blackberries: Dallas, McDonald, Spalding.
Dewberries: Haupt, Austin, Mays, Rogers.
Asparagus: Argenteuil, Conover's Colossal, Palmetto.
Strawberries: Klondike, Lady Thompson, Michaels Early.
Cucumbers: White Spine, Evergreen, Early Cluster.
Cauliflower: Snowball.
Spinach: New Zealand, Argon.
Squash: Crook Neck, White Bush.
Cabbage: Early Jersey Wakefield, Succession.
Radishes: Scarlet Turnip, French Breakfast, Long Scarlet.
Lettuce: Big Boston, California Cream Butter, Hubbard Market.
Beans: Stringless Green Pod, Early Valentine, Hodson Wax.
Peas: Alaskan, Telephone, Champion of England.
Early Corn: Adams Early, Country Gentleman, Yexo.
Beets: Egyptian, Eclipse, Crimson Globe.
Onions: South Texas: Crystal Wax, White Bermuda; North Texas: Prizetaker, White Globe.
Tomatoes: Earliana, Acme; Livingstone, Globe.
Eggplant: Black Beauty, New York Spineless.
Okra: Dwarf Prolific, Long Green.
Sweet Pepper: Chinese Giant, Bell, Ruby King.
Sweet Potatoes: Dooley Yam, Yancey Yam.
Irish Potatoes: Bliss Triumph, Irish Cobbler, Rural New Yorker.
Cantaloupes: Rocky Ford, Eden Gem, Netted Rock.
Watermelons: Watson, Means, Halbert Honey.

No. 10. Five cents worth of lettuce seed will keep a family supplied with this one luxury a whole season when planted in the home garden. Lettuce is a luxury when purchased at five cents or ten cents a head, and it is usually in much poorer condition than when used directly from the garden. The same can be said of endive, parsley, carrots, radishes, mustard, chard, turnips, beets, okra, spinach, beans, peas, tomatoes, peppers, egg-plants, melons, cucumbers, squash, and pumpkins. Sweet potatoes from the garden have a finer flavor and cost less than those taken from a tin can. It takes, at thirty cents per peck, just five cents worth of sweet potatoes to fill a No. 3 can. A No. 3 can of sweet potatoes weighs on an average thirty ounces, and costs fifteen cents at the grocery store. The difference of ten cents is a big price to pay for the cooking and canning of less than two pounds of potatoes. One quarter of a pound of dry beans will make as much as is contained in a No. 2 can. As a

rule, the amount of beans in a ten cent can is worth less than two cents in the raw state. When but little or no extra fuel is needed for their preparation, it is much cheaper to prepare them at home. It is hard to estimate the value of a small, well tended garden to the family living. One-fourth of an acre of land well cared for can easily be made to produce $100 worth of vegetables for table use during the year. These vegetables, or their equivalent, if bought in cans at the market, would likely cost more than twice that amount.

It will often be profitable to have the garden spot contain as much as an acre of ground. With this, considerable patches of Irish and sweet potatoes, dewberries, blackberries, and possibly a bed of strawberries may be included. Potatoes are not so perishable as the more succulent vegetables, and berries are easily canned, while both of them have rich food and tonic qualities.

The mere food value of a garden does not measure its real worth. Many a doctor's bill would be saved and many a bottle of patent medicine would not be purchased if people would only use vegetables more freely. There is no need of taking iron in the form of medicine when it is furnished by a number of vegetables such as greens, spinach, lettuce, peas, and beans. Most vegetables are largely water, but the solid part furnishes the body the needed minerals, lime, sodium, potash, phosphorus, sulphur, and iron, without which good health and mental vigor are impossible. Furthermore, human beings need roughage to keep their bowels active and healthy.

No. 12. There are a number of insect enemies of garden crops. Space will not allow an exhaustive discussion of these pests. The principle thing to observe about them is their habits of taking food. If they chew or bite their food, as is the case with the potato bug, they can generally be controlled by spraying with arsenate of lead, which is used at the rate of two and one-half pounds to fifty gallons of water. If the insects suck their food, as is the case with the plant louse, then you should spray with whale oil soap at the rate of one pound to five or six gallons of water. The correct method of using the various poisons and of otherwise protecting the plants can be learned from free Farmers' Bulletins and by writing to State Entomologist, College Station, Texas, or the State Department of Agriculture, Austin, Texas.

No. 15. A diet of meat, bread, and molasses fails in two respects, (1) it does not give sufficient bulk to stimulate intestinal movement. (2) It does not supply the body with the mineral salts which are needed for building purposes in the growing child and to keep the blood of people of all ages in the proper condition for health. The diet is lacking in fresh fruit and green vegetables.

When sailors and explorers have no fresh fruits or green vegetables for a long time, eczema, purpure, bleeding from the gums, and even scurvy are liable to result. The diet without fruits or vegetables does not supply the materials needed to keep the body in a healthful condition.

No. 16. A diet of meat and bread with a few vegetables is liable to produce constipation, headaches, so-called "biliousness," rheumatism, kidney disease, hardening of the arteries, and certain other chronic diseases that come on too gradually to be noticed until it is too late to remedy them.

No. 17. The garden does not at all seasons of the year furnish a complete variety. For this reason, it is wise to can, dry, and preserve vegetables at other seasons. It is profitable to can such vegetables as tomatoes, string beans, okra, sweet potatoes, beets, blackberries, and dewberries. Okra may be dried, and is valuable to use in soups and with other vegetables. Even though some corn, beans, and okra are canned, it gives greater variety to the food supply to dry some of these also. By the drying process, the pumpkin may also be cured and put by for future use.

(For further information on canning fruit and vegetables, write Miss Bernice Carter, State Agent, Girls' Canning Club Work, A. and M. College, College Station, Texas.)

No. 18. The most satisfactory and economical way of preserving roots, tubers, and cabbage, is to put them into a dark, cool place where it is just moist enough to keep them from drying out. A basement or storm cellar makes a good place for winter storage. Beets, turnips, carrots, and potatoes, if carefully handled so as not to bruise them, may be piled in heaps in a well drained place in the yard and wrapped in hay or corn stalks and then covered with earth to a depth of three or four inches and kept satisfactorily if ventilation is provided. When

this method of winter storing is practiced, it is necessary that the sides of the covering bank of earth be sufficiently steep to drain well. Also, be careful to ditch so that water will not run in at the bottom. Place a small ventilating flue at the top, and make a small opening for ventilation at the bottom on the south side. Be sure to keep the openings closed during rains and freezing weather. Do not store vegetables in soil that is mixed with manure, as this is almost sure to cause them to spoil.

Canned fruit and vegetables will keep best when stored in cool dark places.

For fuller information on the home garden, consult the following bulletins, which will be sent free of charge by their respective publishers upon request:

A Garden Bulletin, by W. S. Taylor and C. H. Winkler, Farmers' Industrial Congress, Dallas, Texas; or The University of Texas, Austin, Texas.

Money Crops Instead of Cotton, A. and M. College, College Station, Texas.

The Cold Pack Canning Method, International Harvester Co., Harvester Bldg., Chicago, Ill.

Bulletins of the United States Department of Agriculture, Washington, D. C.

The Home Garden in the South....Farmers' Bulletin No. 647
The Farmers' Home Garden.....Farmers' Bulletin No. 122
The Farmers' Home Garden.....Farmers' Bulletin No. 149
The Home Vegetable Garden.....Farmers' Bulletin No. 225
Vegetable Growing in Alabama, Circular 1912 .....Farmers' Bulletin No. 14

The following may be had from the Superintendent of Public Documents, Washington, D. C., price 5c each:

Beans.....Bulletin No. 289
Cabbage.....Bulletin No. 433
Tomatoes.....Bulletin No. 220
Asparagus.....Bulletin No. 61
Onions.....Bulletin No. 354
Okra.....Bulletin No. 232
Sweet Potatoes.....Bulletin No. 324
Preparation of Vegetables for the Table.....Bulletin No. 256

Children's Garden for School and Home, by L. K. Miller, published by D. Appleton & Co., New York; pp. 235, price $1.20.

Cut off along this line.

REPORT OF SCHOOLHOUSE MEETING

(Send this report, immediately after the meeting, to A. Caswell Ellis, Director of Extension, the University of Texas, Austin, Texas, and the programs and questions for the following meeting will be sent to you by return mail. Nothing further will be sent until the report is received.)

1. Name of school,.....County.....

2. Principal of School,.....

3. Postoffice Address of Principal,.....

4. Name of Chairman of Meeting,.....

5. Postoffice Address of Chairman of Meeting,.....

6. Name of Secretary of Meeting,.....

7. Postoffice Address of Secretary of Meeting,.....

8. Date of Meeting,.....

9. Subject of Discussion,.....

10. Number present: Women..... Men.....

11. Probable number that will attend next meeting,.....

12. Comments and Suggestions: (Was there much discussion? Was the meeting helpful? Will any practical movement or organization come from it? Do any wish to study the matter further? Can we help in any way?)